ON SOME WATER BEETLES FROM OREGON HOT SPRINGS

by Borys Malkin[1]

In the course of 1957 field trip with Henry Dybas of the Chicago Natural History Museum we collected in two of Oregon's hot springs. At Harney Lake Hot Springs located near Harney Lake in Oregon in a county of the same name we collected on May 28 several specimens of 3 species, namely; *Laccophilus atristernalis* Crotch, *Enochrus obtusiusculus* Mots., and *Hydrotus impressopunctatus* (Sch), swimming cheerfully along the shore of the hot springs in the temperature as high as 52.2° Centigrade. But this seemed to have been the limit of their tolerance and no beetles could be found in the water of the higher temperature, which in spots reached as much as 65 degrees. On May 29 we collected at the Alvord Desert Hot Springs in the same county and here we found numerous *Enochrus conjunctus* Horn., active in the shallow eddies of the springs at the temperature of 47.0 degrees of Centigrade.

These records are of considerable interest because they much exceed the temperatures in which living beetles had been reported. Of all these species, only *E. conjunctus* had been reported in the literature from the hot springs, ranging from 28.2 at Cleveland, Ohio to 40.8 at Cortez, Nevada. (Brues 1932: 266). Brues also said that none of the known American beetles are found in the temperature of over 46.0 degrees of centigrade. He reported thus *Philydrus hamiltoni,* Horn from 45.5 and *Paracymnus subcupreus,* Say from 45.7 from Hot Springs NE. of Bear Lake, Idaho, in which incidentally I also collected the said *Paracymnus* in 1952 in identical temperature. Brues mentions the highest temperature for living and active beetles being 47.5-48.0 degrees. The species he mentions for this is *Laccophilus gracilis* (*Thermarum*) which although regularly found in the water of 28.0 C. may stand much higher temperature.

Of others, Schwartz reported *Helochares normatus* (Lec) and *Hydroscapha natans* Lec. from the hot springs in Arizona in which the temperature ranged between 43.0-44.0 degrees (Schwartz 1914: 163-8).

The evidence from the Oregon hot springs suggests that the upper limits of temperature tolerance is quite higher than had been supposed.

It may also be worth mentioning that the *L. atristernalis* is quite rare in Oregon and that both Hydrophilids are California species and thus the above records are first for Oregon.

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[1] University of Minnesota. Minneapolis, Minnesota.

LITERATURE CITED

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SCHWARTZ, E. A. 1914. Proc. Ent. Soc. Washington. 16:163-168.